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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/575,033	05/19/2000	Pekka Mottonen	872.8708.USU	1031

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EXAMINER	
MEHRA, INDER P	
ART UNIT	PAPER NUMBER
2666	

DATE MAILED: 07/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/575,033	MOTTONEN ET AL.	
	Examiner	Art Unit	
	Inder P. Mehra	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 July 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *3,7,12 and 14* is/are allowed.

6)☒ Claim(s) *1,2,4-6,8-11,13 and 15-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 May 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This is in response to response to amendment dated:.7/5/2005. Claims 1-17 are pending. Out of 1-17 pending claims, claims 15-17 have been added, and claims 1, 10, and 13, have been amended.

2. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-2, 4-6, 9-10, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over ("3-Carrier Compact Proposal, revision 1.0, ETSI SMG2 Working Session on EDGE, May 17-19, 1999, Paris, France, Source: UWCC, PP, 1-16, hereinafter, "3-Carrier Compact Proposal") in view of **Barany et al** (US Patent No. 6,594,252), hereinafter, Barany.

For claims 1, 5, 10, 13, and 15, 3-Carrier Compact Proposal discloses a method for enabling introduction of a 200khz GSM-type network---------- GSM-type network, refer to abstract, introduction and paragraph 2 at page 2;

- providing a 52-multiframe (refer to paragraph 4 at page 3) containing 12 blocks of four consecutive frames (refer to 4/12 reuse (rotating) 4 time groups in sub-paragraph

2 at page 4), two idle frames, and two channels used for control channel purposes (control signaling, refer to sub-paragraph 3 at page 4);

- rotating control channels belonging to a serving time group over non- sequential , alternate timeslot numbers within a frame" (If using an effective 3/9 reuse for control signaling , 3 time groups are used with control on TN1, TN3, and TN5.) , refer to sub-paragraph 2 on page 4 and sub-paragraph 6 on page 5.

"3-Carrier Compact Proposal" does not disclose elaborately, as alleged by applicant ,the following limitation, which is disclosed by Barany, as follows: (Applicant argues that it is disclosed in appendix 3-Carrier Compact Proposal as an example or definition only, refer to page 9, second paragraph".

- "rotating control channels belonging to a serving time group over non-sequential , alternate timeslot numbers within a frame", refer to Barany's col. 11 line 57 through col. 12 line 65, and figs. 11-15;
- at least one timeslot number used to transmit control channels in a frame corresponding to a given serving time group of a first 52-multiframe is different than at least one timeslot number used to transmit control channels in a frame corresponding to the given serving time group of a second 52-multifmme, **as recited by claim 15,** ", refer to Barany's col. 11 line 57 through col. 12 line 65, and figs. 11-15;

It would have been obvious to the person of ordinary skill in the art at the time the invention to use the capability of "rotating control channels belonging to a serving time group over non- sequential , alternate timeslot numbers within a frame", as taught by Barany. The

capability can be implemented in base station and mobile station to conform to the air interface standard. The motivation for using this capability is to avoid interference.

For claims 2, 6, 9-11 and 13, "3-Carrier Compact Proposal" discloses the rotation occurring over odd time slot numbers as 7, 5, 3, 1, 7, 5------etc. and where the rotation occurs between frame numbers (FN) mod 52=3 and 4, refer to paragraph 4 and "If using an effective 3/9 reuse for control signaling, 3 time groups are used with control on TN1, TN3, and TN5.." in second paragraph on page 4.

For claims 4 and 8, 3-Carrier Compact Proposal discloses, information specifying at least the rotation direction is signaled to the mobile station in a downlink synchronization channel, refer to (a mobile will, ----synchronization burst) paragraph 8 at page 5.

For claims 16 and 17, 3-Carrier Compact Proposal discloses all the limitations of subject matter with the exception of the following limitations, which are disclosed by Barrany, as follows:

" the at least one timeslot number used to transmit control channels in the frame corresponding to the given serving time group of the first 52-multiânme comprises first and second timeslot numbers; the at least one timeslot number used to transmit control channels in the same corresponding to the given serving time group of the second 52-multiâame comprises second and third timeslot numbers, **as recited by claim 16, refer to figs. 11-15**; and

the at least one timeslot number used to transmit control channels in the frame corresponding to the given serving time group of the second 52-multifrnme comprises a second timeslot number; and wherein the rotation is performed so that a rotation from the first and second timeslot numbers occurs between the first and second 52-multifrnmes, **as recited by claim 17, as recited by claim 16, refer to figs. 11-15.**

It would have been obvious to the person of ordinary skill in the art at the time the invention to use the capability of the at least one timeslot number used to transmit control channels in the frame corresponding to the given serving time group of the second 52-multifrnme comprises a second timeslot number as taught by Barany. The capability can be implemented in base station and mobile station to conform to the air interface standard. The motivation for using this capability is to avoid interference.

Allowable subject Matter

5. Claims 3, 7, 12 and 14 are allowed.

6. The following is an examiner's statement of reasons for allowance:

As recited by claims 3, 7, 12 and 14,

wherein a mapping of the control channels on timeslot numbers is defined by the following formula: For OXFN mod 52S3,'rN=((6x((FN div52)mod 4)) + 1 + (2xTG))mod 8; and For 45> mod 52S51,TN=((6x((FN div52)mod 4)) + 7 + (2xTG))mod 8, where TG is a time group value.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

7. Applicant's arguments filed 7/5/2005 have been fully considered but they are not persuasive.

Applicant argues, "Rotation of time slots per se is not mentioned in sub-pararaph 6. In fact, a mention of a rotation of timeslots or timeslot number **is not found in the document** 3-carrier Compact Proposal.

Applicant, further, argues, "The Examiner again notes some superficial similarities between the claimed invention and the 3-carrier Compact Proposal, such as the use of a 52-multiframe and time groups. However, the Examiner goes on to equate the description at sub-paragraph 2 of page 4, and sub-paragraph 6 at page 5 of the 3-carrier Compact Proposal with the claimed subject matter "rotating control channels belonging to a serving time group over every other timeslot number" found in the independent claims 1 and 5. It is again respectfully submitted that this is simply not the case.

Applicant further argues that "By contrast, one can see in Appendix A of the 3-carrier Compact Proposal that there is no rotation of control channels belonging to a serving time group over non- sequential, alternate timeslot numbers within a frame. For instance, examining Page 9 of the 3-carrier Compact Proposal (the first page of Appendix A of the 3-carrier Compact Proposal), it is clear that the control channels in the frame corresponding to time group one of the 3-carrier Compact Proposal are always in timeslot zero. Similarly, the control channels in the

frame corresponding to time group two of the 3-carrier Compact Proposal are always in timeslot three. Shown graphically using a portion of page 9 of the 3-cnm'er Compact Proposal, there is no rotation of control channels for the serving time groups one and two of the 3-carrier Compact Proposal".

In response, it is stated that 3-carrier Compact Proposal and Barrany disclose rotating control channel in alternate time slots, as explained in the office action above, in figs. 11-15 of Barrany, these are . rotation of control channels belonging to a serving time group over non-sequential, alternate timeslot numbers within a frame.

In response, it is stated that "3-Carrier Compact Proposal" discloses, "52-multi-frame structure" on page 3, paragraph 4 line 18; and further discloses, " If using an effective 3/9 reuse for control signaling , 3 time groups are used with control on TN1, TN3, and TN5.) , refer to sub-paragraph 2 at page 4 and sub-paragraph 6 at page 5". The sentence, "reuse for control signaling" has been interpreted as "rotating control channels. Further, it is stated that this paragraph reads on the limitation recited in the claims. TN1, TN3 and TN5 are **non-sequential, alternate time slot numbers within a frame.**

Applicant argues that "Finally, on page 5 of the outstanding Office Action, the Examiner discusses Jyrkka et a1., U.S. Patent No. 6,587,695 and asserts that Jyrkka is recited in the Background of Applicants' specification. However, Applicants do not believe that Jyrkka is recited in the Backgrotmd of Applicant's specitication. Moreover, it does not appear that Jyrlçka is of record in the prosecution of the instant application, nor does it appear that Jyrkka is prior art as defined by 35 U.S.C. j 102 to the instant application (the priority date of Jyrkka is Oct. 27,

1999, while the present disclosure claims a priority date of May 28, 199%. Therefore, Applicants submit that Jyrkka does not appear to be applicable to the instant application.

In continuation, it is ,further, stated that **Jyrkka et al** (US Patent No. 6,587,695) in the admitted prior art (Background section) discloses " An Enhanced Packet Radio System (EGRPS) compact control channel solution introduces a discontinuously transmitting rotating control channel. This control channel solution makes it possible to deploy a GSM system with less than a one MHz bandwidth in a synchronous network." This contention maintained by Jyrkka , as disclosed in the background section of said reference, as above, in not disclosed as his invention on Oct. 27, 1999, , but his admission that it is prior art, as described or known to him in the background section, which obviously had happened prior to or prevalent prior to date Oct. 27, 1999.

In light of above explanation, arguments by applicant are not persuasive.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Inder P. Mehra whose telephone number is 571-272-3170. The examiner can normally be reached on Monday through Friday from 8AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Inder Pal Mehra 7/13/05
Inder P Mehra
Examiner
Art Unit 2666

DANG TON
PRIMARY EXAMINER